Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID35547
Project Name	Project - Smart Lender - Applicant Credibility Prediction for Loan Approval
Maximum Marks	4 Marks

Technical Architecture:

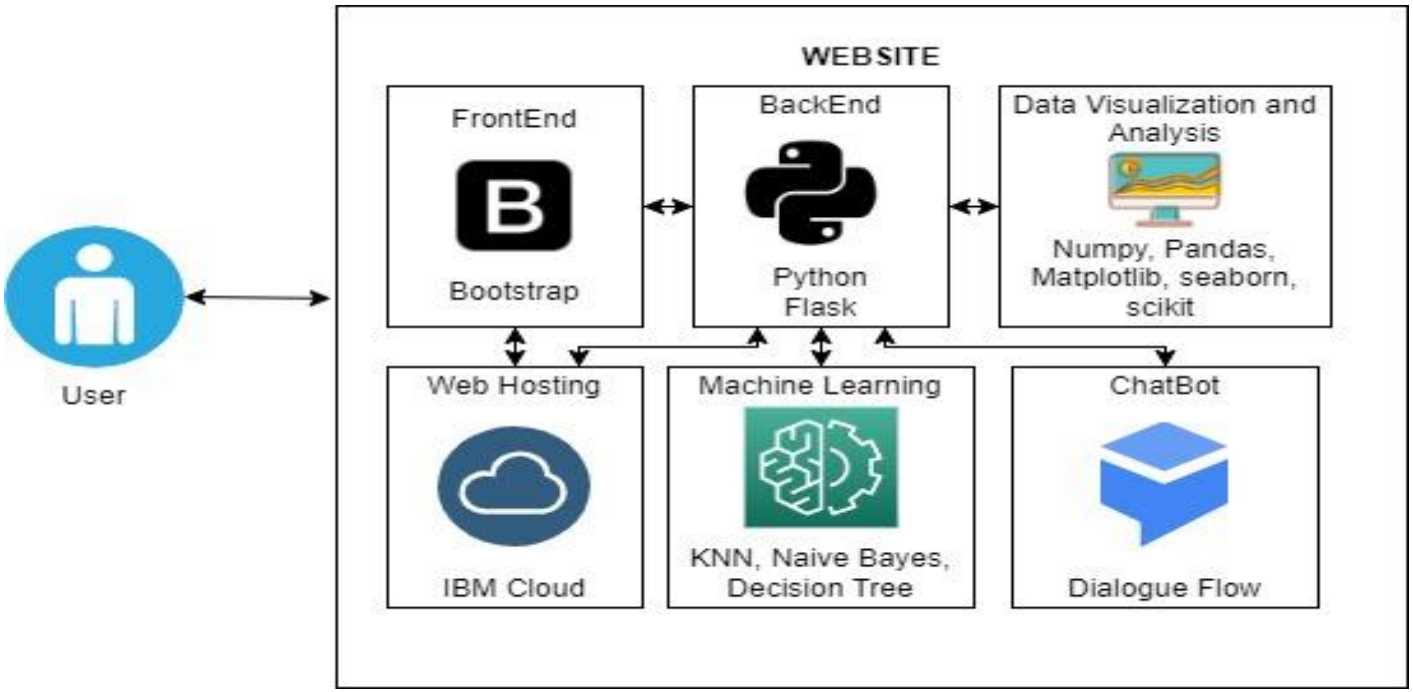

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web Application	Bootstrap
2.	Building Application	Getting user information from User Interface and feeding to the Machine Learning model	Python Flask
3.	Chatbot	Handles basic queries of customers on loan approval	Dialogflow
4.	Data Visualization and Analysis	Reading and understanding the data properly with the help of visualization and data analysis techniques	Python libraries like Pandas,Numpy,Matplotlib and Seaborn
5.	Data Pre-processing	Handling missing values,categorical data and outliers,Scaling techniques	Python libraries like Pandas,Numpy and Scikit learn
6.	Web Hosting	Hosting the application in Cloud	IBM Cloud
7.	Machine Learning Model	Prediction of borrower’s eligibility or loan approval, approvable amount of loan	KNN,Naive Bayes and Decision Tree
8.	Infrastructure (Server / Cloud)	Machine Learning model will be run at the backend	Flask.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask is used to host the website. Python libraries like Matplotlib,Seaborn used for data visualization.Scikit, Numpy,Pandas used for preprocessing and building the models. Dialogflow is used to build the chatbot.	Matplotlib,Seaborn ,Scikit, Numpy,Pandas,Flask and Dialogflow
2.	Availability	Application is available 24 / 7 as it is hosted on IBM cloud. Simple web browser is enough to access the website.	IBM Cloud